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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,835	11/04/2003	Tim Tuan	X-1266 US	7043

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EXAMINER	
LAM, DAVID	

ART UNIT	PAPER NUMBER
2827	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/701,835	TUAN, TIM	
	Examiner	Art Unit	
	David Lam	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,5,6,9,10,13,14 and 17-25 is/are rejected.

7)☒ Claim(s) 3,4,7,8,11,12,15 and 16 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration. A statement over applicant's signature providing a complete post office address is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: *313 on Figure 3*. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 21, 23 are objected to because of the following informalities: In claims 21, 23, line 1, "an PMOS" should be change to -- a PMOS --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 5-6, 9-10, 13-14, 17- 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Tomishima (6,807,109).

Regarding to claims 19-21, Tomishima discloses a memory cell for suppressing sub-threshold leakage in a transistor, the memory comprising: a plurality of transistors (27, 28, 200a, 200b) configurable to store a value, wherein the value can drive the transistor in its off state, wherein if the transistor is an NMOS device having source voltage of VSS and the memory cell drives a gate of the transistor, then the value of slightly more negative then VSS (Vbb); if the transistor is a PMOS device having a source voltage of VDD and the memory cell drives a gate of the transistor, then the value of slightly more positive than VDD (Vpp). *See Figs 8-10, 39-41; Cols. 15-18, 39-41.*

Regarding to claims 22-23, wherein if the transistor is an NMOS device having a gate voltage of VSS and the memory cell drives a source of the transistor, then the value is slightly more positive then VSS (VFRP); if the transistor is a PMOS device having a gate voltage of VDD and the memory cell drives a source of the transistor, then the value is slightly less than VDD (VFRN). *See Figs 8-10, 39-41; Cols. 15-18, 39-41.*

As of claim 24, Tomishima discloses level shifters (60, 62) that receive a non-memory signal and generates a modified gate voltage for a transistor, the modified gate voltage able to suppress sub-threshold leakage in a transistor, the level shifters comprising: means (62) for generating slightly less than a source voltage of the transistor for the modified gate voltage, if the transistor is an NMOS device; and means(60) for generating slightly greater than a source voltage of the transistor for the modified gate voltage, if the transistor is a PMOS device. *See Figs 8-10, 39-41; Cols. 15-18, 39-41.*

As of claim 25, Tomishima discloses a structure for suppressing threshold voltage in a transistor comprising: a circuit (62) that creates a negative gate to source voltage when the transistor is in off state. *See Figs 8-10, 39-41; Cols. 15-18, 39-41.*

With regard to method claims 1-2, 5-6, 9-10, 13-14, 17-18, they encompass the same scope of invention as to that of claims 19-25 except they draft in method format instead of apparatus format. The claims are therefore rejected for the same reason as set forth above.

Allowable Subject Matter

5. Claims 3-4, 7-8, 11-12, 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach wherein the slightly negative is between 0 and proximately -0.2v, between 0 and approximately –0.1v; the slightly positive is between 0 and approximately 0.2v, between 0 and approximately 0.1v.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- McDaniel et al. (6,166,985) disclose an integrated circuit low leakage power circuitry for use with an advanced CMOS process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lam whose telephone number is 571-272-1782. The examiner can normally be reached on 6:00 – 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on 571-272-1777. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Lam

May 26, 2005

DAVID LAM
PRIMARY EXAMINER